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Question Paper Code : 31302



B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Fourth Semester

Computer Science and Engineering

CS 2252/CS 42/EC 1257/10144 CS 403/080250010 — MICROPROCESSORS AND MICROCONTROLLERS

(Common to Information Technology)

(Regulation 2008/2010)

(Also common to PTCS 2252 – Microprocessors and Microcontrollers for B.E. (Part-Time) Fourth Semester – CSE – Regulation 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is the function of parity flag?
2. How 16 bit address is converted into 20 bit address in 8086?
3. What are the differences between 8085 and 8086 processor?
4. Give the operation of CBW and TEST instructions of 8086?
5. What is co-processor?
6. What is a Floating Point Coprocessor?
7. What is bus stealing?
8. What are the operating modes of 8255?
9. What is difference between watch dog timer and ordinary timer?
10. What is the difference between MOVX and MOV?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Write an 8086 ALP to sort out any given 10 numbers in ascending and descending order. (10)
(ii) Explain the addressing modes of 8085 with an example. (6)

Or

- (b) With neat block diagram, explain the architecture of 8086 microprocessor. (16)
12. (a) Explain the Maximum and Minimum mode of operation of 8086. (16)

Or

- (b) (i) Design an 8086 based system in minimum mode containing 64kb of EPROM and 64kb of RAM. (12)
(ii) Give the functions of NMI, BHE and TEST pins of 8086? (4)
13. (a) Explain the architecture of 8087 numeric data processor. (16)

Or

- (b) (i) Differentiate closely coupled configuration and loosely coupled configuration. (6)
(ii) Explain the architecture of 8089 I/O processor. (10)
14. (a) (i) Bring about the features of 8251. (6)
(ii) Discuss how 8251 is used for serial data communication. (6)
(iii) Explain the advantages of using the USART chips in microprocessor based systems. (4)

Or

- (b) List the major components of 8279 keyboard display Interface and explain their functions. (16)
15. (a) (i) Describe the 8051 I/O port structure. (6)
(ii) Explain the internal and external data memory organization of 8051. (10)

Or

- (b) (i) How do you interface 8051 micro controller with key board? Explain in detail? (8)
(ii) How do you interface 8051 micro controller with an ADC? Explain. (8)